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MAY 24 2004

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Appl. No. 09 / 587,270
Comm. Dated May 24th, 2004
Reply To Office action of March 24th, 2004

Remarks / Arguments

Objections to the rejection of my claims by the examiner

Here are my arguments:

There is no true multiplexing used in my invention

My invention is not a multiplexing method in the traditional sense, the use of multiple wavelengths in the transmission is primarily for the purpose of modulation unlike in the conventional multiplexing where the purpose of using different color laser beams simultaneously in a fiber-optic transmission is simply to achieve a faster data rate. In addition my invention in its basic form sends the impulses one after another in a series, which contradicts the idea of multiplexing. Further, in the traditional fiber-optic transmission, even when solitons are used, the transmission consists of laser pulses many wave cycles long because of the technological and physical limitations. My invention is a special transmission – modulation method which physics and technology are entirely different with and poorly comparable to the technology of multiplexing. The use of true multiplexing is not even realistic in my invention because of the tendency of different wavelength impulses to interfere with each other, unlike in the narrow-band communications where the carriers keep the transmissions from interfering.

My invention is not obvious

There is no obvious way to achieve the transmission method of my invention. Its technology is totally different compared to the technologies related to its constituents. Fullerton's (USPN 6,549,567) idea to use even length ultra-wide band impulses is basically the same as the early wireless transmission experiments, my invention is a distinctly different technology because it introduces a unique modulation method in combination of using different wavelength impulses in the field of technology where that kind of method has been unknown. Fullerton provides only notions about non-applicability of frequency modulation and constraints on applicable pulse widths, these don't describe, anticipate or otherwise make obvious my invention. My invention has never before been used and there is no prior art for it. The fact that the ultra-wide band technologies are still at an early developmental stage proves that it is very little studied field.

Conclusion:

My invention serves a unique purpose and demand which Fullerton's invention, prevalent multiplexing technologies or other prior art cannot fulfill or satisfy, neither can they replace or anticipate my invention in any way. My invention entirely fulfills the requirements of patentability, including novelty and non-obviousness. Therefore there is no justifiable reason to reject my claims 4 to 16.

Special arguments concerning claim 12:

Fullerton does not describe a wavelength selection feature

Fullerton's figure 7 describes the multipath effect in an electromagnetic transmission, that is, the same transmitted signal is reflected by obstacles and travels different routes to the destination. This multiplication of a same signal is a non-wanted disadvantageous phenomenon for obvious reasons, therefor there is no reason to deliberately produce such effect in the wireless communications. In any way that has nothing to do with the claim 12 in my application, which describes a system with a feature where the transmitting wireless communication device is capable to choose the wavelength of the transmitted impulse, the examiner's argument is clearly erroneous. Fullerton does not describe any feature for the transmitting device selecting the wavelength of the transmitted impulses. This feature is not a true multiplexing technique either, it serves the purpose of wavelength selection and requires special technical solutions which are inherently different to the traditional optical multiplexing, it is meant specially for one-cycle impulses and there is no prior art for such arrangement, it is therefor novel and not obvious.

Conclusion:

As concluded and explained earlier, and because the special remarks of the examiner are clearly erroneous, there is no justifiable reason to reject my claim 12 and the dependent claim 13.

Special arguments concerning claim 14:

The allocation system serves other purposes and works quite differently than multiplexing

The system in claim 14 is first and foremost a wireless communication traffic organization system, not a data rate maximizing multiplexing method. Its purpose is to regulate and control wireless traffic which consists of simultaneous communications of multiple wireless devices, creating a favorable environment for segmenting different types of communications and providing best quality for each individual transmission. Allocating different impulse wavelengths for different use has several important benefits which serve completely other purposes than the traditional multiplexing, and the technology of the allocation itself can poorly be compared to that of the multiplexing. The allocation of impulse wavelengths makes easier for the wireless telecommunication operators to operate independently of each other in designating the specific wavelengths they can use in their transmissions. The allocation is useful also in coordinating the wireless traffic so that there will be minimized cross-communication interference between individual transmissions. The allocation provides also a tool for separating local and long range wireless communications so that there is minimal interference. Using dynamic allocation enhances the benefits further and makes the system even more distinguished, it also provides advanced security making eavesdropping more difficult.

As earlier explained, the use of true multiplexing is not even realistic in my invention because of the tendency of different wavelength impulses to interfere with each other, what also makes the allocation especially delicate and challenging. There is no prior art for this kind of system, it has never before been used, and its technology is no way related to the traditional multiplexing.

Conclusion:

As demonstrated above, the system in claim 14 serves completely other purposes than the traditional multiplexing, its technology is no way related to the traditional multiplexing, and there is neither other prior art for this kind of system. Therefor there is no justifiable reason to reject my claim 14 and the dependent claims 15 and 16.